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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/631,363 | 07/31/2003 | Bryan Youngpeter | 10541-1658 | 2153 |
| 57444 | 7590 | 11/09/2006 | EXAMINER | |
| AUTOMOTIVE COMPONENTS HOLDINGS LLC C/O MACMILLAN, SOBANSKI & TODD, LLC ONE MARITIME PLAZA, FIFTH FLOOR 720 WATER STREET TOLEDO, OH 43604-1853 | | | GILLAN, RYAN P | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3746 | |

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/631,363

Applicant(s)

YOUNGPETER ET AL.

Examiner

Ryan P. Gillan

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4,5,7,8 and 10-16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 2,4,5,7,8 and 10-16 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 7/31/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/1/06 has been entered.

Claim Rejections - 35 USC § 112

2. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation, "there being no differential pressure across the plunger tending to displace the plunger axially," is not supported by the specification, in such a way, as to comply with the written description requirement.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4, 5, 7, 8 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimura et al. (5,860,797) in view of Yokota et al. (6,041,883). Fujimura et al. teach a housing (1) defining a bore (15) having an axis, a fluid discharge port (18a) communicating with the bore at a first axial location, and a fluid bypass port (1a) at a second axial location having an opening communicating with the bore at a second axial location; said bore comprising a first bore end and a second bore end and a pump outlet passage communicating with the bore at the first end (integral with 18a); a sleeve (18) secured onto the housing at said second bore end and extending along the axis away from the housing; a flow control valve (14) slideably received in the bore for opening and closing the inlet (col. 3 lines 40-43), said flow control valve defining an inlet for opening the fluid bypass port for admitting fluid thereto (col. 3 lines 40-54); the inlet having a size dependent upon the position of the flow control valve within the bore, wherein the flow control valve slides axially to vary the size to the inlet through which flow can enter the bypass port from the bore and contains a means for biasing the valve in the open position (col. 3 lines 40-54), the biasing means the means comprising a coil spring (17) including a first end and a second end axially opposite the first end; pumping elements are disposed within the housing and communicating with the fluid bypass port (clearly seen in figure 2), for pumping fluid to the fluid discharge port, said pumping elements located within the housing and comprising a cam chamber (12) and a rotor (5) having retractable vanes (11) disposed within the cam chamber, a plunger (16) adjacent the second bore end and secured to and contacting the flow control valve located within the sleeve, and axially displaceable along the axis in response to the force produced by

the spring, for moving the flow control valve along the axis (col. 3 lines 40-54); a bracket (integral with the housing) secured to the second bore end and formed with an axial passage and a second bore, the sleeve secured to the bracket; a hollow rod (16a) secured to the flow control valve, extending through the axial passage of the bracket and into the sleeve, providing an annular space between the sleeve and a radial outer surface of the rod (clearly seen in figure 3).

5. Fujimura et al. fail to teach a sleeve secured onto the housing at said second bore end and extending along the axis away from the housing, a plunger disposed within the sleeve, axially displaceable along the axis and operatively connected to the flow control valve, and an electromagnetic coil disposed about the sleeve and adapted for applying an electromagnetic field to the plunger to vary the size of the inlet and thereby regulate the flow of fluid into the fluid bypass port; a coil spring located in the sleeve, seated against displacement relative to the housing at the first end and seated against the plunger at the second end, wherein the spring urges the flow control valve to open the inlet bypass port; the sleeve including an end cap, and wherein plunger includes a rear end adjacent the end cap and a pressure equalization passage extending from the rear end and communicating with fluid adjacent the flow control valve.

6. Yokota et al. (6,041,883) teach a sleeve (4, integral with the actuator) secured onto the housing at said second bore end and extending along the axis away from the housing (clearly seen in figure 1), a plunger (37) disposed within the sleeve, axially displaceable along the axis and operatively connected to the flow control valve (14), and

an electromagnetic coil (4) disposed about the sleeve and adapted for applying an electromagnetic field to the plunger to vary the size of the inlet and thereby regulate the flow of fluid into the fluid bypass port (col. 6 lines 44-67); a coil spring (17) located in the sleeve, seated against axial displacement relative to the housing at the first end and seated against the plunger at the second end (clearly seen in figure 1), wherein the spring urges the flow control valve to open the inlet bypass port and the electromagnetic force urges the control valve to close the inlet of the bypass port (col. 6 lines 44-67); the sleeve including an end cap (36), and wherein plunger includes a rear end adjacent the end cap and a pressure equalization passage (39) extending from the rear end and communicating with fluid adjacent the flow control valve. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujimura et al. by replacing the hydraulic actuation with an electromagnetic coil of Yokota et al. operably connected to the plunger to regulate the flow of liquid into the fluid bypass port as a means of electronically controlling the valve in response to turning maneuvers of a vehicle, using the steering angle to calibrate minimum or maximum flow requirements (col. 8 lines 45-50).

Response to Arguments

7. Applicant's arguments filed 9/25/06 have been fully considered but they are not persuasive. Applicant argues neither patent '883 nor '797 disclose a coil spring that is seated against axial displacement relative to the housing, however as cited above Fujimura discloses coil spring (17) secured to the housing (1) and seated against axial displacement.

8. The applicant also argues that the coil spring (17) taught by Yokota does not oppose the electromagnetic force produced by coil (54) and the spring does not tend to open the bypass port. However, as the electromagnetic force tends to open or close the bypass port, the spring will create a bias that is opposed to such movement and will tend to open and close the bypass port (col. 6 lines 44-67).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is 571-272-8381. The examiner can normally be reached on 8:30 am - 5:00 pm; Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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**EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER**